

Case 3693

***Cryptodacus* Hendel, 1914 (Insecta: Diptera: TEPHRITIDAE): proposed suppression of *Cryptodacus* Gundlach, 1862 (Reptilia, Serpentes, COLUBRIDAE)**

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Abstract. The purpose of this application, under Article 23.9.3, is to conserve current usage of the well-established genus-group name *Cryptodacus* Hendel, 1914 for a genus of Neotropical fruit flies by suppression of the earlier, unused name *Cryptodacus* Gundlach, 1862, currently a junior synonym of *Arrhyton* Günther, 1858, a genus of snakes, under the plenary power of the Commission, in the interest of nomenclatural stability. *Cryptodacus* Gundlach has not been used as a valid name since 1883, whereas *Cryptodacus* Hendel has been used in a significant body of literature relating to fruit fly systematics, morphology and phylogeny and is the currently used name in various name and molecular databases.

Keywords. Nomenclature; taxonomy; Insecta; Diptera; TEPHRITIDAE; *Cryptodacus*; *Cryptodacus obliquus*; Reptilia; Serpentes; Neotropical fruit flies; snakes.

1. *Cryptodacus* Gundlach, 1862 (p. 1002) was proposed as a genus of snakes (Reptilia, Serpentes) with *C. vittatus* Gundlach (currently *Arrhyton vittatum* (Gundlach) as type species by monotypy. It was last used as a valid name by Bocourt (1883) and has been considered a junior subjective synonym of *Arrhyton* Günther, 1858 (type species *A. taeniatum* Günther) since Boulenger (1894, p. 251) in his *Catalogue of the Snakes in the British Museum* listed it in the synonymy of *Arrhyton*, where it has remained (Wallach et al., 2014). *Arrhyton* is the only genus in the subtribe ARRHYTONINA Hedges & Vidal (Tribe ALSOPHIINI), and is a well-defined monophyletic group of eight species restricted to Cuba. It belongs to a group whose relationships have been analyzed recently (Hedges & Garrido, 1992; Hedges et al., 2009).

2. *Cryptodacus* Hendel, 1914 (p. 84) was proposed as a genus of fruit flies (Insecta, Diptera, TEPHRITIDAE) with *C. obliquus* Hendel as type species by original designation. It is preoccupied by *Cryptodacus* Gundlach, 1861.

3. *Lezca* Foote, 1978 (p. 27), proposed with *L. tau* Foote as type species by original designation, is a junior subjective synonym of *Cryptodacus* Hendel (Norrbom, 1994).

4. Koçak in Koçak & Kemal (2009, p. 11) proposed *Muhabbetiella* as a replacement name for *Cryptodacus* Hendel, 1914, although this was unnecessary because *Lezca* Foote would be the valid name if *Cryptodacus* Hendel is not considered valid (Article 23.3.5 of the Code).

5. *Cryptodacus* Hendel currently includes 10 valid species occurring from Mexico to Bolivia and southern Brazil (Norrbon, 1994, 2004; Norrbom & Korytkowski, 2008): *Cryptodacus lopezi* Norrbom, 1994 (p. 40), from Guatemala; *C. obliquus* Hendel, 1914 (p. 84) from Panama, Peru and Bolivia; *C. ornatus* Norrbom, 1994 (p. 41) from Colombia, Ecuador and Brazil (Amazonas); *C. parkeri* Norrbom, 1994 (p. 43) from Costa Rica; *C. quirozi* Norrbom, 1994 (p. 44) from Mexico (Veracruz); *C. silvai* Lima, 1947 (p. 153) from Brazil (Rio Grande do Sul); *C. tau* (Foote, 1978, p. 27) from Mexico, Guatemala, Costa Rica and Panama; *C. tigreroi* Norrbom, 1994 (p. 46) from Ecuador; *C. trinotatus* Norrbom & Korytkowski, 2008 (p. 32) from Panama; and *C. univittatus* Norrbom & Korytkowski, 2008 (p. 36) from Panama.

6. *Cryptodacus* Hendel has been the accepted name for a genus of fruit flies for more than 100 years. It is the accepted name in the latest generic revision and species descriptions (Norrbon, 1994; Norrbom & Korytkowski, 2008), in phylogenetic studies of the genus (Norrbon, 1994) and various higher taxa within the economically important family TEPHRITIDAE (Norrbon, 1990, 1997; McPheron & Han, 1997; Han & McPheron, 1999; Smith & Bush, 1999; Han & Ro, 2009), in regional generic keys and manuals (e.g. Foote, 1980; Norrbom, 2010) that are the primary references for the identification of fruit flies in the Neotropical Region, in regional catalogs (Aczél, 1950; Foote, 1967), and in the worldwide catalog and database of Norrbom et al. (1999) and Norrbom (2004), which provided a comprehensive listing of the fruit flies (Insecta, Diptera, TEPHRITIDAE) as part of the Biosystematic Database of World Diptera (now Systema Dipteroorum [Pape & Thompson, 2013]). This work compiled all available names of TEPHRITIDAE to provide a complete baseline of existing knowledge and to promote nomenclatural stability. In addition to publications, *Cryptodacus* Hendel is the accepted name in the following critical scientific databases and data infrastructures: Systema Dipteroorum (<http://www.diptera.org>), the preeminent database for fly names; The Integrated Taxonomic Information System (ITIS; <http://www.itis.gov/>); BOLD (DNA barcoding database; <http://www.barcodinglife.com>), which includes 3 species of *Cryptodacus*; and Encyclopedia of Life (EOL; <http://eol.org/>). Identified specimens are present in at least 15 Museum and University collections.

7. Adoption of *Lezca* as the valid name in place of *Cryptodacus* Hendel would cause considerable nomenclatural confusion in the TEPHRITIDAE because *Cryptodacus* is the name used overwhelmingly for this taxon in the literature (see above), including the primary reference for the identification of fruit flies in the Neotropical Region (Norrbon, 2010), in online databases, and in entomological collections. Transfer of the species to *Lezca* would result in ten new or in one case restored combinations, this in addition to the ten unnecessary new combinations in *Muhabbetiella* proposed by Koçak & Kemal (2009). This further confusion could be avoided by the suppression of *Cryptodacus* Gundlach, 1862. Because the latter name is a junior synonym and has not been used as a valid name in over 130 years, this action would have minimal effect on the nomenclature of Serpentes, whereas it would promote stability of nomenclature within TEPHRITIDAE. Only one of the requirements for reversal of precedence (Article 23.9) is met by this case. *Cryptodacus* Gundlach has not been used as a valid name since 1899, fulfilling the first requirement (Article 23.9.1.1). Although *Cryptodacus* Hendel has been used as a valid name by more than 10 authors in at least 26 publications (a submitted list of usage of the name *Cryptodacus* Hendel, 1914 is kept

by the Commission Secretariat), it has been used in 22 publications in the last 50 years (since 1965), and thus the second requirement (Article 23.9.1.2) is not fulfilled.

8. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to suppress the generic name *Cryptodacus* Gundlach, 1862; for the purposes of both the Principle of Priority and the Principle of Homonymy;
- (2) to place on the Official List of Generic Names in Zoology the name *Cryptodacus* Hendel, 1914 (gender: masculine), type species by original designation *Cryptodacus obliquus* Hendel, 1914;
- (3) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Cryptodacus* Gundlach, 1862, as suppressed in (1) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to I.C.Z.N., Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).